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AUTHORITY

USNSWC ltr, 24 Oct 1975; USNSWC ltr, 24 Oct 1975



SECURITY INFORMATION





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ARLINGTON HALL STATION

ARLINGTON 12, VIRGINIA

U. S NAVAL PROVING GROUND DAHLGREN, YIRGINIA

REPORT NO 1014

AIRCRAFT ROCKET FUZE SYSTEMS

T-2023 P. I. ROCKET FUZE; EVALUATION TESTS OF

FINAL Report

Assignmen: MPG-Re2b-11-1-52

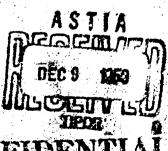
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Classification CONFIDENTIAL SECURITY INFORMATION

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PART A

SYNOPSIS

- 1. The T-2023 fuze has been designed for use with the 2"75 HEAT rocket head. Previous functioning tests of the fuze were conducted by the Naval Proving Ground for Picatinny Arsenal in 1950-51. Due to modifications of the rotor additional tests on the fuze were requested at this time. +/
- 2. The object of this test was to determine whether the T-2023 fuze will function satisfactorily with:
 - Mod 502A Rotor in lieu of the M501A Rotor.
- Mod 502A Rotor with straight RDX lead (PX-8-796) in lieu of the M501A Rotor which has an M29 Detonator plus an RDX lead.
- It is concluded that in the present tests the T-2023 fuze subjected to high velocity impacts, functioned satisfactorily:
- Nine out of ten times when the Mod 502A Rotor was used in lieu of the M501A Rotor.
- Ten out of ten times when the Mod 5024 Rotor with a straight RDX lead (PX-8-796) was used in place of the same rotor having an M29 Detonator plus an RDX lead.
 - Ten out of ten times with a Mod 501A Rotor.
- With a fuze functioning time of approximately 56 to 69 micro seconds, as measured on a high speed oscilloscope.

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PART B

INTRODUCTION

1. AUTHORITY:

This test was authorized by reference (a) and conducted in accordance with reference (b).

2. REFERENCES:

- a. NOL spdltr NP/NOL/X1-1(2444) Ser 2741 DF:GDB of 2 May 1952
- b. OCO ltr ORDTA, 0.0.471.82/1051(c)ORDBB-TE2471.94/64-137 of 22 April 1952
- c. NPG Report No. 779 of 12 May 1951

3. BACKGROUND:

The T-2023 fuze has been designed for use with the 2,75 HEAT rocket head. Previous functioning tests of the fuze were conducted by the Naval Proving Ground for Picatinny Arsenal in 1950-51. Due to modifications of the rotor additional tests on the fuze were requested at this time.

4. OBJECT OF TEST:

The object of this test was to determine whether the T-2023 fuze will function satisfactorily with:

- a. Mod 502A Rotor in lieu of the M501A Rotor.
- b. Mod 502A Rotor with straight RDX lead (PX-8-796) in lieu of the M501A Rotor which has an M29 Detonator plus an RDX lead.

5. PERIOD OF TEST:

a.	Date Project Letter	2 May 1952
b.	Date Necessary Material Received	5 & 6 May 1952
	Date Commenced Test	7 May 1952
d.	Test Completed	14 May 1952

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6. REPRESENTATIVE PRESENT:

Mr. R. O. Nitzsche

Picatinny Arsenal

PART C

DETAILS OF TEST

- 7. DESCRIPTION OF ITEMS UNDER TEST:
 - a. Lot PAE-9120: T-2023 P. I. Rocket Fuze as shown in Figure 1. Initiated upon impact by means of a percussion primer and detonator in the nose. The fuze was equipped with a Mod 501A Rotor.
 - b. Lot PAE-9121: Same as Lot PAE-9120 except rotor changed from Mod 501A to Mod 502A.
 - c. Lot PAE-9122: Same as Lot PAE-9121 except for explosive components. Straight RDX lead used in place of M29 detonator plus RDX lead.
- 8. DESCRIPTION OF TEST EQUIPMENT:

Rocket Heads - 2".75 Rocket Head T-2016; 0.92 lbs. Composition "B" with tetryl booster pellet; total head weight 5.65 lbs.

Adapters - 2275 head to 510 HVAR motor; Picatinny Dwg. PX-8-539.

Motors - 5%0 rocket motors Mk 2 Mod 3.

Target - 7-1/2" Class B (homogeneous) armor plate at 0° obliquity.

Launcher - NPG 1050 ft.

Velocity Measurements - Potter Counter Chronograph.

Cameras - 16mm hi-speed Fastax; Ballistic Synchro.

Fuze Functioning Time Measurements - Photoelectric detector, Tektronix type 513D cathode ray oscilloscope, Fairchild-Polaroid oscillograph camera, copper contact screens.

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9. PROCEDURE:

- a. The 2"75 shaped charge rocket heads T-2016 containing the T-2023 nose fuzes at ambient temperature (approximately 70°F) were assembled to 5" HVAR motors by means of a steel adapter. A second 5" HVAR motor was used as a pusher for the first 200 ft. of travel on the 1050 ft. launcher. All rounds were fired at zero obliquity against a 7-1/2" homogeneous armor plate positioned 285 ft. from the muzzle of the launcher. Velocities were measured 75 ft. before the target. Hi-speed 16mm Fastax cameras, operated at 4000 frames/second covered the target to insure that satisfactory impacts had been made on all shots.
- b. No difficulty was encountered in determining the penetration of the rounds inasmuch as all but 4 completely penetrated the target. Those that had only a partial penetration produced a bulge on the back of the plate, indicating that penetration was within an inch of being complete.
- c. Fuze functioning times were measured during the last two days firing by means of a high speed oscilloscope. Time was measured from the contact of the fuze and plate to the detonation of the head. The contact of the fuze and plate was sensed by means of a contact screen which was placed 3/4" before the plate. When the mose of the fuze penetrated the screen and made contact with the plate, an electric circuit was completed. This circuit closure triggered the sweep of a Tektronix Type 513D Cathode Ray oscillograph. A photoelectric detector was set up near the plate to detect the flash of the detonation. The burst signel from this photoelectric detector was fed to the vertical deflection input of the oscillograph. Thus the time from the beginning of the trace to the burst signal represented the time required for the fuze to function. The pattern on the escillograph was recorded on a Fairchild-Polaroid oscillograph camera. For impacts 39926, 39928, and 39935, the oscillograph was set for a sweep speed of 40 micro-seconds per centimeter, with a total length of about 10 contineters or 400 micro-seconds being available. For impacts 39927, 39929, and 39934, the sweep was set for 20 micro-seconds per centimeter, or 200 micro-seconds total. The exact calibrations of the escillograph sweeps were determined in the laboratory by means of a 100-KC standard frequency generator. From these calibrations the function times were computed.

10. RESULTS AND DISCUSSION:

- a. Detailed results of the test are provided in Table I and Impact Records 1-30. Figure 1 is a drawing of the T-2023 fuze and Figure 2 a view of the impacts resulting from the first days firing. Excerpts from the hi-speed camera records of impacts producing complete and incomplete penetrations with Lot PAE-9122 fuzes are shown as Figures 3 and 4. Figure 5 is a ballistic synchro camera picture of a round in flight, shortly before target impact.
 - b. Following is a summary of the test results obtained:

 Target: 7-1/2" Cl. B plate (homogeneous armor) at 0° obliquity.

Fuse Lot	No. Rds. Fired	Penetration Results	Fuse Functioning Times <u>Micro-Seconds</u>
PAE-9120	10	8 Comp; two 7" 9 Comp; one dud 9 Comp; one 7-1/4"	Not taken
PAE-9121	10		56 to 69
PAE-9122	10		Not taken

- c. No appreciable difference in penetration effectiveness could be noted between the original style of fuze and its two modifications. The cause of the dud on Not PAR-9121 could not be explained since the explosive in the head deflagrated upon impact, leaving no clues. The higher percentage of complete penetrations obtained with Lot PAR-9122 as compared with Lot PAR-9120 (the original T-2023 fuze) is insufficient to judge it as being superior, due to the small number of rounds fired. However, the simplified method of explosive loading Lot PAR-9122 should indicate a definite advantage for it after proving that functions at least equally as well as the other two types.
- d. As reported in reference (c), previous attempts to measure fuse functioning times with a photoelectric-cell camera and oscilloscope had failed due to slowness of the latter, resulting in its inability to separate the fuse impact from the fuse detonation. The acquisition of new equipment in the interimmade it possible to trigger the oscilloscope when the nose of the fuse made contact with the target and obtain a recognizable vertical component of the beam when the fuse detonated. Photographing the scope with a Land type camera nade it possible to

obtain a record of the functioning time within a few minutes after the round was fired. A single motor was used for propulsion of the rounds on which fuze times were measured, to insure burnout of the motor before it came into the view of the photoelectric detector. The luminescence of a burning motor probably would have triggered the photoelectric cell promaturely. The single motor produced a lower striking velocity but it should not have altered the fuse functioning time.

PART D

CONCLUSIONS

- 11. It is concluded that in the present tests the T-2023 fuze subjected to high velocity impacts, functioned satisfactorily:
- a. Nine out of ten times when the Mod 502A Rotor was used in lieu of the M501A Rotor.
- b. Ten out of ten times when the Mod 502A Rotor with a straight RDX load (PX-8-796) was used in place of the same rotor having an M29 Detonator plus an RDX lead.
 - c. Ton out of ten times with a Mod 501A Rotor.
- d. With a fuze functioning time of approximately 56 to 69 micro-seconds, as measured on a high speed oscilloscope.

The tests upon which this report is based were conducted by: F. W. KASDORF, Firing Director, Rocket Battery
Terminal Ballistics Department

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By direction

U. S. NAVAL PROVING GROUND DAHLGREN, VIRGINIA

Twentieth Partial Report

on

Aircraft Rocket Fuze Systems

Final Report

on

T-2023 P. I. Rocket Fuze; Evaluation Tests of

Project No.: NPG-Re2b-11-1-52

Copy No.: 4 No. of Pages: 8

AUG 4 1952

Date:

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TABLE I

FIRING RECORD OF T-2023 FUZE AND MODIFICATIONS

IN 2175 SHAPED CHARGE HEAD T-2016

NOTE: All rounds fired from NPG 1050 ft. launcher with 5" HVAR motors vs 7-1/2" homogeneous armor plate at 0° obliquity.

Date	Impact No.	Head No.	Striking Velocity (f/s)	Penetration	Exit Dimensions Inches	Fuze Funct. Time Micro-Secs.
			Lot F	/AE-9120		
5-7-52 5-7-52 5-7-52 5-13-52 5-14-52 5-14-52 5-14-52 5-14-52 5-14-52	39903 39904 39905 39928 39929 39931 39932 39934 39935	299 329 420 238 352 164 201 96 301 422	2025 2039 2053 1545 1542 1813 1832 1808 1532 1550	Comp. 7" Comp.	3/8 x 3/8 None 3/8 x 3/8 1/4 x 1/4 1/4 x 1/4 3/8 x 3/8 None 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8	65 69
			Lot P	AE-9121		
5-7-52 5-7-52 5-7-52 5-12-52 5-12-52 5-12-52 5-13-52 5-13-52	39906 39907 39908 39921 39922 39923 39924 39925 39926 39927	101 381 402 167 255 362 405	2132 2043 2043 1840 1857 1957 1929 1860 1551 1511	Comp. None-Dud Fuze	3/8 x 3/8 3/8 x 3/8 1/4 x 1/4	56

TABLE I (Cont d)

Date	Impact No.	Head No.	Striking Velocity (f/s)	Penetration	Exit Dimensions Inches	Fuze Funct. Time Micro-Secs.
•			Lot	PAE-9122		
5-8-52 5-8-52 5-8-52 5-8-52 5-9-52 5-9-52 5-9-52 5-9-52	39909 39910 39911 39912 39913 39914 39915 39916 39917 39918	211 341 322 342 236R 152R 210 283R 390	1958 2017 2034 1964 1976 1901 1864	Comp.	3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 None 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8	

U. S. NAVAL PROVING GROUND

IMPACT NO. 39903

DAHLGR	EN, VIRGINIA
	IMPACT DATE 5-7-52
	NPG TEST NO. 1-2222-1.24
OBJECT Functioning Test	of T-2023 Fuzes for 2175 Shaped Churge
Mocket Head T-2015 Lite Two 540 F	
Reference: MPQuor itr. 200 100 to the	0.101H dated
Reference: Buthax ltr.NF/NOL/XI-I(24	10.101H dated 2 May 1952
Task Assignment No.	
PLATE TARGET	ROCKET
Gage 7-1/2" Class B	HEAD: Cal. 2075 Type Shaped Churus
Maker Bath.	Mark F Mod No. 44 Vt.
No.55G232A2 Group H-113A	Maker
Dimensions 131" x 190"	Lot No. T2016
	Filler: Typecomp R Wt. 0.92#
OBLIQUITY O°	Fuzes 12023 Lot Pa-k 9120
PENETRATION Complete	Boosters
Thickness at impact 7:50	Wt. of head (as fired)
No. c? impact on plate 1	MOROD. Col CH Mr. o Mod o
Dist. from nearest impact 0	MOTOR: Cal. 5" Mc. 2 Mod 3
Dist. from near edges 66" and 21.2"	Motor temp. 120° Wt.86.50#
Impact area 2" X 2-1/2"	COMPANY DOMES Manie Mad
Spall: Front O Back O	COMPLETE ROUND: Mark Mod
Dish 0 Spur 1/8"	Wt. (as fired)
Cracks 0	Wt. (burned)
Punching [tarovak standard	CANTON TWO ON A STAN
Back Button (thrown) (atarted)	OTHER INFORMATION
Bulge	ALN: RMDA-847-HA-45
Through opening 3/8" x 3/8"	LAUNCHER 1050' Rocket Launcher
·	INOMOTIES TOSO ROCKET LAUTCHER
ROCKET	PERFORMANCE
**************************************	f/s: Striking 2024 Residual
	1/8: Striking 2025 Residuel
Puze functioning On Tagest	w Onder (None)
	التركيب والمراوات والمراوا
Distance of burst behind plate	
Condition of recovered round	in (EFFECTIVE) (INEFFECTIVE) condition.
REMARKS:	· · · · · · · · · · · · · · · · · · ·
	i still
Photo No. NP9-4 3283	Signed FW. Kander
•	F. W. Cuscorf
	ORL. ENG.
	N.
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- July Mary	There to intermeter
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U. S. NAVAL PROVING GROUND

IMPACT NO. 3990L

DAHLGR	EN, VIRGINIA
	IMPACT DATE 5-7-52
	NPG TEST NO.T-2222-1.24
OBJECT Functioning Test	of T-2023 Fuzes for 2775 Shapau Charges
Hocket Head T-2016 with two 540 H	
Reference: NPGNOT ttr.	0 1014 dated
Reference: Buork ltr. NP/NOL/X1-1	(2444) Ser 2741DP4999 2 May 1352
Task Assignment No. NDG-Re2b - 1	1-1-52 dated
PLATE TARGET	ROCKET
Gage 7-1/2H Class R	HRAD: Cal. 2875 Type Shaped Charge
Maker Beth.	Mark Mod No. Vt.
No. 55G232 42 Group B-113A	Maker
Dimensions 131" X 190"	Lot No. T2016
	Filler: Typeomp.B Wt. 0.92#
OBLIQUITY 0°	Puzes T2023 Lot PA-E9120
PENETRATION 7"	Boosters 1
Thickness at impact 7250	Wt. of head (as fired)
No. of impact on plate 2	
Dist. from nearest impact 6"	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edges Tog mand RAGH	
Impact area 2" x 2"	
Spall: Pront 0 Back 0	COMPLETE ROUND: Mark Mod
Dish 0 Spur 0	Wt. (as fired)
Cracks	Wt. (burned)
Punching (Eurova) (started)	<u> </u>
Back Button (thrown) (started) (OTHER INFORMATION
Bulge 1/16"	ALN: RMDA-847-HA-45
Through opening 0	M _ H _ H
	LAUNCHER 1050 Rocket Launcher
ROCKET I	PERFORMANCE
	Mean
	?/s: Straining 2039 Residual
Puze functioning On TARGET	
	- Order) - (Reae)-
Distance of burst behind plate	
Condition of recovered round	
HOAQ VAS	D (LIVE CONTROL (MANAGEMINE) CONDITION.
DB4ARY4.	
RDIARES:	
Photo No. NF9-4 4283	Signed F. W. Kander
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U. S. NAVAL PROVING GROUND

DAHLGREN, VIRGINIA

IMPACT NO. 39905

	Drazonen, Vandavar	IMPACT DATE 5-7-52
		NPG TEST NO. T-2222-1.21
OBJECT Funct	ioning Test of T2023 Fuz	es for 2175 Shaped Charge
Reference: MPGwor Har. A	want The 101H	dated
Reference: BMORE ltr. NPY	MOL/XI-1 (2444) Ser 2741 DF	:Gabted 2 May 1952
rask Assignment No. NPG	- Re2b - 11-1-52	dated
PLATE TARGET		ROCKET
Sage 7-1/2# Class_	R HEAD: Cal.	2775 Type Shaped Charge
Maker Bath	Mark	Mod No you WE.
No. 55G232A2 Group B	-1134 Maker	
Dimensions 131" X	190" Lot No.	T2016
		Typeomp. B Wt. 0.92#
OBLIQUITY 0°		T2023 LotPA-E 9120
PENETRATION Complet	e Boosters	
Thickness at impact	V	ad (as fired)
No. of impact on plate		mu (49 11190)
<u> </u>		. 5" Mk. 2 Mod 3
Dist. from nearest imp		
Dist. from near edgesT		P. 120° Wt 87 65"
Impact area 2-1/4		Maria Mad
	ack O COMPLETE RO	
Dish O Spur		
Cracks 0	Wt. (burn	•a)
	arted)	
Back Button (thrown)	OTHER INFOR	mation
Bulge 0	AIN:	RMDA-847-HA-45
Through opening 3/	8" X 3/8"	W = N = H W
+	LAUNCHER	1050! Rocket Launcher
	ROCKET PERFORMANCE	
	Mean	2253 - 44 - 1
	Velocity, f/s: 33744000	2053 Residual
Puze functioning ONT	MART	
Explosive action (Righ	Order) (Lew Order) (Mome)	
Distance of burst behind	plate	•
Condition of recovered r	ound	
	Head was in (EFFECTIVE)	(INEXPECTIVE) condition.
RDIARKS:		
Photo No. NP 9-4 7283	Signed_ 子.	-W / J. J.
FILOTO NO. NF 4-4-203	STRUGU	
		F.W.Kasdorf
CONFIDENT A	IMPACI RECORD #3	JRD.ENG.

	PROVING GROUND	IMPACT NO.	39906
DARLGREI	N, VIRGINIA	IMPACT DATE_	5-7-52
		NPG TEST NO.	T-2222-1.2
OBJECT Functioning Tes	+ ef manaa w		
Rocket Head T2016 with two 500 HV	Ad Motors vs 7-1	/2" Cl B Plut	pec Charge
Reference: Bubbaxitr No. NOL/XI-1 (2444			
Reference: Bunkaxitr NOL/X1-1 (2444) Task Assignment No. NPG-Re2b - 11-1-)Ser2741DF:GDEda 52 da	ted 2 May 1	752
PLATE TARGET	u	ROCKET	
Gara 2 3 /On Class D	MPAD. Cal		
Gage 7-1/2" Class B Maker Beth	HRAD: Cal. Mark	odNo	ted Cuarge
No. 55G232A2 Group B-1134	Maker		
Dimensions 131" X 190"	Lot No.	T2010 -	
	Filler: Type	Comp.E Wt. 0	92#
OBLIQUITYO	Fuzes T20	23 Lot PA-H 91	121
PENETRATION Complete	Boosters	1	
Thickness at impact 7"50	Wt. of head	as fired)	
No. of impact on plate 4			
Dist. from nearest impact 6"	MOTOR: Cal5	والمراجع والم والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراج	od
Dist. from near edge #51" and R60"	Motor temp.	120°	Wt.90.00#
Impact area 2-1/2" X 2-1/2" Spall: Front 0 Back 0	COMPLETE ROUND:	Mark No	od.
Dish 0 Spur 1/4"	Wt. (as fired	,	, a
Cracks	Wt. (burned)	• /	
Punching (thrown) (started)	, , , , , , , , , , , , , , , , , , ,		
Back Button (thrown) (acartes)	OTHER INFORMAT	ON	
Bulge0	AIN: B	MDA-642-HA-45	
Through opening 3/8" x 3/8"	T AVIETO CONTRACTOR	H -375-H - H	
	LAUNCHER 1	150 Rocket La	encher
ROCKET PE	RFORMATICE		
	Mean		
PlightVelocity, f/	e: Striking	2132 Residual	
Puse functioning On Tracet		.1	
Explosive action (High Order) (Low- Distance of burst behind plate	Order) (None)		
Condition of recovered round			
	AND THE CHANGE OF THE CAME	PRECTIVE) COL	ndition.
REMARKS:			
MDO-4 2002		111	ı
Photo No. NP9-4 7283	Signed F. W.	Sador	
		Chara	Ladorf
CONFIDERATIAL			
SECURITY NEGATIVE AND		0Kn·1	LNC.
Impact Re	cord #4		

U. S. NAVAL PROVING GROUND

IMPACT NO. 39907

DAHLGRI	EN, VIRGINIA
	IMPACT DATE 5-7-52
•	MPG TEST NO. 1-2222-1.2
OBJECT Functioning To	ast of T2023 Fuzas for 2775 Shaped Charge
Rocket Hand T2010 with two 5"0 HV	AR Motors vs 7-1/2" Cl.B Plate.
Reference: MPG Noger 14 24 24	
Reference: MWOCK 1tr.NP/NEI/XI-1 (24	
Task Assignment No. NPG - Re2b - I	
PLATE TARGET	ROCKET
Gage 7-1/2" Class	HEAD: Cal. 2075 TypeShaned Charge
Maker Beth.	Mark Mod No 32/ Wt.
No. 553232A2 Group B-113A	Maker
Dimensions 131" x 190"	Lot No. T2016
	Filler: Type Comp. BWt. 0.92#
OBLIQUITY 0°	Fuzes 72023 Lot PA-E 9121
PENETRATION Complete	Boosters
Thickness at impact 7-1/2"	Wt. of head (as fired)
No. of impact on plate 5	- WO. OI 11004 (20 11104)
Dist. from nearest impact 2"	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edge 7/8" and 160"	
Impact area 2" x 2"	Motor temp. 120° Wt 87.55#
Spall: Front O Back O	COMPLETE ROUND: Mark Mod
Dish O Spur 1/4 n	Wt. (as fired)
Cracks	Wt. (burned)
Punching (thrown) (started)	wo. (but 404)
Back Button (thrown) (started)	OTHER INFORMATION
Bulge	ALN: RMDA-375-HA-45
Through opening 3/8" x 3/8"	
3/6 A 3/8	LAURCHER 1050' Rocket Launcher
	TOSO ADEREC LAURCHER
ROCKET P	ERFORMANCE
7/14 mb4	Mean
Flight Velocity, f	/s: Strikingx 2043 Residual
Puze functioning of Tagget.	
	Graer (Mone)
Distance of burst behind plate Condition of recovered round	
	n (EFFECTIVE) (IMEFFECTIVE) condition.
RDIARKS:	
AUGUALO:	
Photo No. Nr9-49283	Signed F. W. Kander
	STRUMU 1. W. V VOCANA
	F.W. Kasdorf
	ORD. ENG.
CONFIDE!ATIAL	
Cafinda i tra i MEAR ARATAM Torrict	Number 45

U. S. NAVAL PROVING GROUND

DAHLGREN, VIRGINIA

IMPACT NO. 39908

	IMPACT DATE 5-7-52
	NPG TEST NO.T-2222-1.24
OBJECT Functioning T	Test of T2023 Fuzes for 2"75 Shaped Charge
Rocket He.d 12016 with two 5	10 HVAR Motors vs 7-1/2" Cl.R Plate.
Reference: XBuCbux 1tr.NP/NVL/XI-	1(2444)Ser2741DF:CDMated 2 May 1752
Task Assignment No. NPG - Re2b	- 11-1-52 dated
PLATE TARGET	ROCKET
Gage 7-1/2" Class B	HRAD: Cal. 2075 Type Shaped Charas
Maker Beth.	Mark Mod No.71, Wt.
No. 55023242 Group 8-1134	
Dimensions 131" X 190"	
	Filler: Type Comp. B Wt. 0.92#
OBLIQUITYO°	Puzes
PENETRATION Complete	Boosters
Thickness at impact 7-1/2	W. of head (as fired)
No. of impact on plate 6	MOROD. Only the Mod
Dist. from nearest impact 2	HAL! Notor temp. 1200 Vit.87.60
Dist. from near edges T63-474	
Impact area 1-1/4" X 1	
Spall: Propton x 2" Back 0	COMPLETE ROUND: NarkNod
Dish O Spur 1/ Cracks O	Wt. (as fired)
Prophing (Shares) (charles)	wt. (burned)
Punching (thrown) (started) Back Button (thrown) (started)	OTHER IMPORMATION
Through opening 3/8" x 3/8"	ALN: RMDA-275-HA-45
1111 odgi openting 3/8" 1 3/8"	
·	LAURCHER 1050' Rocket Launcher
ROCK	ET PERPORMANCE
	Mean
Flight Velocit	y, f/s: Atabidae 2043 Residual
Puze functioning On TARGET	
Explosive action (High Order)	(Low Order) (None)
Distance of burst behind plate	
Condition of recovered round	
Head v	as in (EFFECTIVE) (INEFFECTIVE) condition.
REMARKS:	
NDO-4 3005	
Photo No. NP9-49283	Signed T. W. Sandar
	_/
LONFIDENTIAL	T.W.Kasdorf
BOORITY INFARMENTS IN	
A TOP OF THE PARTY	Impact Record #6 ORD. ENG.

SECURITY

IMPACT RECORD

	PROVING GROUND IMPACT NO. 39909
DARLURE	IMPACT DATE 5-8-52
	NPG TEST NO. T-2224-1.5
OBJECT Functioning tes	st of T2023 fuzes for 2"75 Shaped
Reference: NPG NOTET. TO A TO TO Reference: Buord ItrNP/NOL/X1-1 (2444) Task Assignment No. NPG-Re2b - 11-1	
PLATE TARGET	ROCKET
Gage 7.50 Class B Maker Bethlehem	HEAD: Cal. 2"75 Type Shaped Charge Mark _ Mod _ No Wt
No. 55G232A2 Group B-113A Dimensions 131" x 190"	Maker Picatinny Arsenal T2016 Lot No.
OBLIQUITY O°	Piller: Type Comp.B Wt92# Puzes T2023 Lot PA-E-9122
Plight Velocity, f/ Puze functioning On TeaceT Explosive action (High Order) (Low Distance of burst behind plate Condition of recovered round	MOTOR: Cal. 5" Mk. 2 Mod 3 Motor temp. 90° Wt. 86.65# COMPLETE ROUND: Mark Mod Wt. (as fired) Wt. (burned) OTHER INFORMATION ALN: RMDA-375-HA-45 N -642- N LAUNCHER 1050 ' Rocket Launcher ERPORMANCE Mean Striking 1958 Residual
REMARKS:	
Photo No.	Signed F. M. Kasborf, 1h
CONFIDENTIAL SECURITY INFORMATION	ord. Eng.
AN EIREINY (A)	+ Hancold 47

IMPACT RECORD

1 1 A PT L 4 PT	AL PROVING GROUND IMPACT NO. 39910
	REN, VIRGINIA IMPACT DATE 5-8-52
	NPG TEST NO.T2224-1.5
OBJECT Functionin	g test of T2023 fuzes for 2775 Shaped
eference: xBuCock ltnp/NOL/X1-1(244	dated 2 Mars 1 DEG
ask Assignment No. NPG-Re2h - 11-	44)Ser2741DF:GDB dated 2 May 1352
PLATE TARGET	ROCKET
age 7"50 Class B	HEAD: Cal. 2"75 Type Shaped-Charg
aker Bethlehem	Mark Mod No.39, Wt.
o. <u>55G232A2 Group B113A</u> imensions 131" x 190"	Maker Picatinny Arsenal, T2016 Lot No.
BLIQUITY 0°	Filler: Type Comp. B Wt 92# Puzes T2023
	Lot PA-E-9122
ENETRATION Complete	Boosters 1
Thickness at impact 7.50	Wt. of head (as fired) -
No. of impact on plate 8	
Dist. from nearest impact 12"	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edges 753 and 172"	Motor temp. 90° Wt. 88.95#
Impact area 2" x 2"	ACMBINER DARWO. Mark Mad
Spall: Pront 0 Back 0	COMPLETE ROUND: Mark Mod
Dish O Spur 1/4W Cracks O	Wt. (as fired)
Punching (thrown) (started)	wc. (burned)
	OTHER INFORMATION
Back Button (thrown) (started) Bulge O	ALN: RMDA-375-HA-45
Through opening 3/8" x 3/8"	" -642- W
im oden obentue 3/9. 7 3/9.	LAUNCHER 1050 Rocket Launcher
	LAUNCHER 100 ROCKEC LEGISCHET
ROCKET 1	PERFORMANCE
	f/s: Striking 2017 Residual
light Velocity,	1/8: SCHIEFING 2017 Residual
ruze functioning On TARKET Explosive action (High Order) (Lee	
istance of burst behind plate	J. Golf (Notes)
ondition of recovered round	
	in (EFFECTIVE) (IMEFFECTIVE) condition.
. Gar væn	(at recition) (therrecities) condition.
EMARKS:	
hoto No.	Signed F. W. Aggdorf
	F. W. KASDORF, Ah
hoto No. NFI DENTIAL CURITY INFORMATION	F. W. KASDORF, Ah Ord. Eng.

CONFIDENTIAL IMPACT RECORD

	L PROVING GROUND IMPACT NO. 39911
DASLGR	EN, VIRGINIA IMPACT DATE 5-8-52
	NPG TEST NO.T-2224-1
OBJECT Functioning to Charge Rocket He	est of T2023 fuzes for 2"75 Shaped
eference: Butte ltrup/NOL/X1-1 (24)	4. 10/14 dated 44)Ser2741DF:GDEdated 2 May 1752
ask Assignment No. NFG-Re2b - 11-	1-52 dated
PLATE TARGET	ROCKET
age 7"50 Class B	HEAD: Cal. 2"75 Type Shaped-Char
ker Bethlehem	Mark Mod No. 22Vt.
o. 55G232A2 Group B-113A imensions 131" x 190"	Lot No.
BLIQUITY 0°	Filler: Type Comp B Wt92# Puzes T2023
ENETRATION Complete	Lot PA-E-9122 Boosters
Thickness at impact 7!50	Wt. of head (as fired)
No. of impact on plate 9	
Dist. from nearest impact 12"	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edges 750 and 166"	Motor temp. 90° Wt. 86.80#
Impact area 2" x 2"	
Spall: Front 0 Back 0	COMPLETE ROUND: Mark Mod
Dish 0 Spur 1/4" Cracks 0	Wt. (as fired)
Cracks 0 Punching (thrown) (started)	Wt. (burned)
Back Button (thrown) (eterted)	OTHER INFORMATION
Bulge 0	ALN: RWDA: -377-HA-45
Through opening 3/8" x 3/8"	" -762- "
	LAUNCHER 1050' Rocket Launcher
	TO HOURS V LANDING
ROCKET P	PERFORMANCE
3 d aba	l.ean
lightVelocity, f	/s: Striking 2034 Residual_
The Conditioning	
uze functioning On Taras	
xplosive action (High Order) (Lon	Order) (Rome)
xplosive action (High Order) (Lea	-trder - (Rose)
xplosive action (High Order) (Lendistance of burst behind plate ondition of recovered round	
xplosive action (High Order) (Lea istance of burst behind plate ondition of recovered round	
xplosive action (High Order) (Leadistance of burst behind plate ondition of recovered round Head Vas 1	
xplosive action (High Order) (Leadistance of burst behind plate ondition of recovered round Head Vas 1	
aplosive action (High Order) (Leadistance of burst behind plate ondition of recovered round Head Vas 1	
xplosive action (High Order) (here is tance of burst behind plate ondition of recovered round Head Vas is BAARKS:	n (EFFECTIVE) (INEFFECTIVE) condition.
cyplosive action (High Order) (Low istance of burst behind plate condition of recovered round Head Vas 1	n (EFFECTIVE) (IMEFFECTIVE) condition. Signed 7. H. Massarl
xplosive action (High Order) (here is tance of burst behind plate condition of recovered round Head Vas is BARKS:	n (EFFECTIVE) (INEFFECTIVE) condition.

	VAL PROVING GROUND IMPACT NO. 39912
DYPT	GREN, VIRGINIA IMPACT DATE 5-8-52
	NPG TEST NOT-2224-1.5
on room	test of T2023 fuzes for 2"75 Shaped
Charge Rocket	Head T2016
Reference: Property NP/NOL/XI-!	70. /A/ dated 2444)Ser2741DF: GDMated 2 May 1 752
Task Assignment No. NPG-Re2b - 1	
PLATE TARGET	ROCKET
Gage 7:50 Class B	HRAD: Cal. 2"75 Type Shaped-Charge
Maker Bethlehem	Mark Mod No. 4. Wt.
No. 55G232A2 Group B-J.13A	Maker Picatinny Arsenal, T2016
Dimensions 131" x 190"	Lot No.
ART TOWER	Filler: Type Comp B Wt92#
OBLIQUITY O.	Puzes T2023
PENETRATION Complete	Lot PA-E-9122 Boosters 1
Thickness at impact 7.50	Wt. of head (as fired)
No. of impact on plate 10	771 01 11000 (00 12100)
Dist. from nearest impact 5"	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edgesT57"andL74	
Impact area 2-1/2" x 2-1/2"	
Spall: Front 0 Back 0	COMPLETE ROUND: Mark Mod
Dish 0 Spur 1/8"	Wt. (as fired)
Cracks 0	Wt. (burued)
Punching (thrown) (started)	AMUDO THUADMANTAN
Back Button (thrown) (started) Bulge 0	OTHER INFORMATION ALN: RMDA-642-HA-45
Through opening 3/8" x 3/8"	W -377-HA-45
In ough opening jio x jio	LAUNCHER 1050 ROCKE Launcher
ROCKET	PERFORMANCE
Flight Velocity,	f/s: Striking 1964 Residual
Puze functioning Julages!	176. Datating 1904 Hestidial
Explosive action (High Order) (L	ov Order) (None)
Distance of burst behind plate	
Condition of recovered round	
Head Vas	in (EPFECTIVE) (INEPFECTIVE) condition.
REMARKS:	
Photo No.	Signed F. W. KASDORF / 1h
	F. W. KASDORF / 1h
CONFIDENTIAL	Ord. Eng.
SECURITY INFORMATION	

Imract Record #10

IMPACT RECORD

v. s.	. NAVAL PROVING GROUND IMPACT NO. 39913	,
	DAHLGREN, VIRGINIA IMPACT DATE 5-8-	
	NPG TEST NO.T-2224	-1.6
OBJECT Function Charge Rocket	ning test of T2023 fuzes for 2.75 Shaped t Head T2016	
Reference: NPGVOI ier. Reference: MUCCO 1tr.NF/NCL/X1 Task Assignment No. NFG-Root	-) (3444) So-S241 DD-620-4-4	¥
PLATE TARGET	ROCKET	***
Gage 7750 Class B Maker Bethlehem	HEAD: Cal. 2"75 Type Shaped-Cl	
No. 55G232A2 Group B-113 Dimensions 131" x 190"	Maker Picatinny Arsenal, T2016 Lot No.	6
OBLIQUITY 0°	Piller: Type Comp B Wt	
PENETRATION 7-1/4" Thickness at impact 7"50 No. of impact on plate 11	Boosters 1 Wt. of head (as fired)	
Dist. from nearest impact 2 Dist. from near edges 755 and Impact area 2-1/4" x 2-1/2	1758 Motor term 000 WE No 67	
Dish O Spur O Cracks O	COMPLETE ROUND: Mark Mod	
Punching (thrown) (started) Back Button (thrown) (started) Bulge 1/2"		
Through opening 0	LAUNCHER 1050' Rocket Launcher	
ROCI	KET PERFORMANCE	
Fute functioning	ty, f/s: Striking 1976 Residual	product and gargest
Explosive action (High Order) Distance of burst behind plate Condition of recovered round	LOW OR COLUMN	
	Vas in (MALCHIVE) (IMARECTIVE) condition	1.
REMARKS: .		
Photo No.	Signed T. W. Niedo	
CONFIDENTIAL . SECURITY INFURMATION	F. W. KASDORF 1h Ord. Eng.	

Impact Record oll

CONFIDENTIAL	U. S. NAVAL PROVING GROUND DAHLGREN, VIRGINIA	IMPACT NO. 39914
	DALLONDA, VINGINIA	IMPACT DATE 5-9-52
		NPG TEST NOI-2222-1.24
OBJECT Fu T201	inctioning test of T2023 fuzes	for 2775 Rocket Heads
Reference: Buordyltrum	ZIOL/X1-1(2444)Ser2741DF:GDBd	ated
Task Assignment No. No.	G-Re2t - 11-1-52 d	ated 2 May 1352
PLATE TARGET		ROCKET
Gage 7:50 Class	B HEAD: Cal. 2	900
Maker Bethlehem		775 Type Shaped-Chg.
No. 55G23ZA2 Group) DELLIA MAKAN Dian	od - No. ELAWE.
Dimensions 131" x 1	90" Lot No.	tinny Arsenal
		e Comp B Wt92#
OBLIQUITY 0.	Fuzes T20	23. Lot PAE-9122
		S. DOVING SILL
PENETRATION Comp		1
Thickness at impact	7.50 Wt. of head	(as fired)
No. of impact on pla	· · · · · · · · · · · · · · · · · · ·	
Dist. from nearest !		<u>5" Mk. 2 Mod 3</u>
Dist. from near edge	s 756 and 182" Motor temp.	70° Wt. 88.20#
Impact area 2-1/4		
	Back C COMPLETE ROUND	: MarkMod
	ur 1/8" Wt. (as fired	d)
	Wt. (burned)	
Back Button (thrown)	started)	- Am
Bulge 0		
Through opening 3/8	ALN: RL'DA-	
The order obeating		-375- n
	DAUNCHER 1050	Rocket Launcher
	ROCKET PERFORMANCE	
Flight	Mean	- 43
Puze functioning on I	Velocity, f/s: Statisting 19	01 Residual
Explosive action (Mic	h Order) (Low-Order) (Neme)	
Distance of burst behin	n order) (see order) (nose).	
Condition of recovered	ma biere	
	Head Vas ID (EPPECTIVE) (IN)	PODD PHY YPOY
	THE TENTE OF THE PROPERTY OF THE	EFFECTIVE) condition.
R DIARKS:	•	
Photo No.	Signed	Kradent
	Ye it.	Cisbory, Ch
CONFIDENT IAL	Ord. En	ig.
SECURITY INFORMATION	Impact Record 412	

CONFIDENTIA	AL		. NAVAL I			IMP.	ACT NO	. 399)15
			DAHLGREN,	, VIRGII	AIA	IMP.	ACT DA	TE5-	.9-52
						NPG	TEST	NO. T-2	222-1.24
	OBJECT Ro	Function:	ing test	of T20	23 fuze	es for	2"75	Shaped	l Charge
Reference: Reference: Task Assig	NPG NOT it Busha lt nment No.	NP/NOL/X	(-1 (2444) - 11-1	0/H Ser274		dated_dated_dated_	2	May 1	352
•	PLATE TAR	GET				RO	CKET		
No. of in Dist. from Dist. from Impact and Spall: Dish Cracks Punching Back But Bulge	ethlehem A2 Gr 131" ; 0° Comp at impa mpact on om neares om neare rea 2 Pront 0 0 (thrown ton (thro	lete 7,50	5" d L77" -172"	Mark Maker Lot I Fill Fuze: Boos Wt. Motor COMPLE Wt. Wt. OTHER ALN	TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	Mod atinny pe Com 23. Lo (a. f 5" M 70° D: Ma ed)	No. Arsen Arsen D B.Wt t PAE- Ired) k. 2 Tt HA-45	Mod Mod	3 55#
		RO	CKET PERI			<u> </u>	NE V L	anone	
Plight Pure funct Explosive Distance of Condition	action (Ow TARABI High Order chind plat red round	Low_O	rdex)_{	loge)				tion.
REMARKS:									
Photo Wo.				Signed	F. A	KASDOR		<i>;</i>	
SECURITY :		on		•	Ord.	Eng.			

Immict Record #13

IMPACT RECORD

ONFIDENTIAL		L PROVING GROUND	IMPACT NO. 39916
	DAHLGR.	EN, VIRGINIA	IMPACT DATE 5-9-52
			NPG TEST NO. T-2222-1.21
	Functioning t Rocket Heads		es for 2"75 Shaped
Reference: NPG NOIST. Reference: MANOR 1tr. Task Assignment No. N	P/NOI/X1-1 (24	/a./21 - d. 44)Ser2741DF:GDW	ated 2 May 1952 ated 2 May 1952
PLATE TARGE	!		ROCKET
Gage 7.50 Class Maker Bethlehem No. 55G232A2 Group Dimensions 131" x 1 OBLIQUITY 0°	B-113A	Mark T2016 Me Maker Picati Lot No. Piller: Type	No. 2 AVt. nny Arsenal Comp B Wt. 92#
			Lot PAE-9122
Thickness at impact No. of impact on pla Dist. from near edge Impact area 2-1 Spall: Front 0 Dish 0 S Cracks 0 Punching (thrown) Back Button (thrown Bulge 0 Through opening 3/	7.50 to 14 mpact 10" sr53" and 192" /4" x 2-1/4" Back 0 our 1/4" started) (started) 8" x 3/8"	Motor temp. COMPLETE ROUND Wt. (as fire Wt. (burned) OTHER INFORMAT: ALN: REDA-	5" Mk. 2 Mod 3 70° Wt. 87.85# : Mark Mod
Flight		ERFORMANCE Mean /s: St rum ba	- Residual
Puze functioning (Hi Explosive action (Hi Distance of burst beh Condition of recovered	h TARGET gh Order) (Low Ind plate i round	-	
REMARKS:			
Photo No.		Signed F. M.	i sador
CONFIDENTIAL SECURITY INFORMATION		Ord. E	KASDORF 1E

IMPACT RECORD

	AL PROVING GROUND IMPACT NO. 39917
DAMLG	REN, VIRGINIA · IMPACT DATE 5-9-52
	NPG TEST NO. T-2222-1.7
	NPG TEST NO. I TELEBRICA
OBJECT Functioning to Rocket Heads T20	est of T2023 fuzes for 2"75 Shaped Charge
Reference: MPO NOPLER. The Reference: XBLOUGE itr NP/NOL/XI-1(2)	444) Ser 2741DF: GDRated 2 May 1752
Task Assignment No. NFG-Re2b - 11	-1-52 dated
PLATE TARGET	ROCKET
Gage 7250 Class B	HEAD: Cal. 2"75 Type Shaped-Chg.
Maker Bethlehem	Mark T2016 Mod No. 72 Wt.
No. 550232A2 Group B-113A	Maker Picatinny Arsenal
Dimensions 131" x 190"	LOT NO.
OBLIQUITY 0°	Piller: Type Comp B Wt92# Puzes T2023. Lot PAE-9122
	Fuzes IRURY, LOU PHE-91RR
PENETRATION Complete	Boosters 1
Thickness at impact 7.50	Wt. of head (as fired)
No. of impact on plate 15	
Dist. from nearest impact 4"	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edgesT61 "andL83"	Motor temp. 70° Wt. 88.50#
Impact area 2" x 2-1/4" Spall: Front 0 Back 0 Dish 0 Spur 1/4"	COMPLETE ROUND: Mark Mod
Dish 0 Spur 1///	COMPLETE ROUND: Mark Mod
Cracks 0	Wt. (as fired) Wt. (burned)
Punching (thrown) (started)	
Back Button (thrown) (starked)	OTHER INFORMATION
Bulge	ALN: RMDA-377-HA-45
Through opening 3/8" x 3/8"	" -642- "
	LAUNCHER 1050 Rocket Launcher
ROCEPT :	PERFORMANCE
NOOREI	Mean
Plight Velocity,	f/s: Striking - Residual
Pure functioning of These	
Explosive action (High Order) LLo	w-Order) (Robs)
Distance of burst behind plate	
Condition of recovered round	In (EPPECTIVE) (INEPPECTIVE) condition.
neau vas	LE (EFFECTIVE) (INEFFECTIVE) CONCILION.
REMARKS:	
Photo To	
Photo Io.	Signed + W. Landors
CONFIDENTIAL .	F. W. KASDOPO, 1h Ord. Eng.
SECURITY INFORMATION	AT MO TIME .

Imract Record #15

CONFIDENTIAL	U. S. NAVAL PROVING GROUND	IMPACT NO. 39918
	DAHLGREN, VIRGINIA	IMPACT DATE 5-9-52
		NPG TEST NO. T-2222-1,24
OBJECT Roc.	Functioning test of T2023 fuze	
Reference: NPG NO ltr. Reference: Bucker ltr. Task Assignment No.	NF/NCI/X1-1(2444)Ser2741DF:GDB	dated 2 May 1352 dated
PLATE TARGE		ROCKET
Gage 7750 Class Maker Bethlehem No. 55G232A2 Grou Dimensions 131 x	ip B-113A Maker Pics 190" Lot No.	No Wt. Atinny Arsenal Pe_Comp B Wt92#
OBLIQUITY 0°	Puzes T202	3. Lot PAE-9122
Thickness at impact No. of impact on pl Dist. from nearest Dist. from near edg Impact area 2" Spall: Front 0 Dish 0 S Cracks 0 Funching (thrown) Back Button (thrown Bulge 0 Through opening 3	wt. of head late 16 limpact 1" MOTOR: Cal. lest 59" and L97" Notor temp. x 2-1/4" Back 0 COMPLETE ROUND by t. (as fire wt. (burned (started) a) (started) ALN: RMDA- /8" x 3/8" LAUNCHER 1050	5" Mk. 2 Mod 3 70° Wt. 87.95# D: Mark Mod ed)
	ROCKET PERFORMANCE	
Flight Fuse functioning on Explosive action (Ri Distance of burst before condition of recovered		
REMARKS:		
Photo No.	Signed F. W. / F. W.	Kardon
CONFIDENTIAL SECURITY INFORMATION	Ord. E	ng.

Impact Record #16

IMPACT RECORD

	VAL PROVING GROUND	IMPACT NO. 39921
·	GREN, VIRGINIA	IMPACT DATE 5.12.52
		NPG TEST NO.T-2222-1.24
Rocket Head T2016 with two 570 H	est of T2023 Fuzes	for 2"75 Shaped Charge
ROOKET HEED T2016 WITH two 570 H	an nocket Motors v	S /-1/2" Cl. B Plate.
Reference: Brown ltrNp/NOL/XI (244	CO 101H de	ted.
Hererence: Buchat ItrNP/NOL/XI (244	4)Ser2/41DF:GDB de	2 May 1 752
Task Assignment No. NPG-Re2b - 11	-1-52 a	ted
PLATE TARGET		ROCKET
Gage 7-1/2" Class B	NEAD: Cal. 2	775 Type Shared Charge
Maker Bath.		od No. WE.
Maker Bath. No.55G232A2 Group H-113A Dimensions 131" X 190"	Maker Pic	estinny Arsanal
Dimensions 131" X 190"	Lot No.	
OBLIQUITY O°		Comp.B.Wt.
000000000000000000000000000000000000000	120	23 , Lot Park-9121
PENETRATION Complete	Boosters	
Thickness at impact 7.50	Wt. of head	as fired)
No. of impact on plate 17	teaministra	
Dist. from mearest impact 1"	MOTOR: Cal.	5" Mr. 2 Mod 3
Dist. from near edgement and og		90° Wt.88.35#
Impact area 2" I 9"		
Impact area 2" Y 9" Spall: Pront 0 Back 0	COMPLETE ROUND:	NarkNod
Dish 0 Spur 1/L"	Wt. (as fired	1)
Cracks	Wt. (burned)	
funching (thrown) (started)		
Back Button (thrown) (stanted)	OTHER INFORMAT	
Bulge	AIN: PM	DA-847-HA-45
Through opening 3/8" x 3/8"		" -377- "- "
	LAUNCHER 1050	Rocket Launcher
2005	PERSONATOR	
. RUCKET	PERFORMANCE Mean	
Flight Velocity,	f/s: Stylking 1	RLO Panidual
Pure functioning On TARGET	1/8: ************************************	Otto ResidueT
Explosive action (High Order) (L.	OVER ADMINISTRATION OF THE PARTY OF THE PART	
Distance of burst behind plate		
Condition of recovered round		
	In (EFFECTIVE) (IN	differive) condition.
REMARKS:		
Photo No.	Signed F. W.	Kadan
		4
		G.W.Kusdorf
Con-idential		ORD. ENG.
BECURITY INFORMATION Im-	act Record #17	
	man a service a Had	

IMPACT RECORD

	PROVING GROUND IMPACT NO. 39922
DARLARE	N, VIRGINIA IMPACT DATE 5-12-52
	NPG TEST NO.T-2222-1.2
OBJECT Functioning Test	tof T202. Fuzes for 2075 Shaped Charge
Rocket Heed T2016 with two 550 HVA	Rocket Motors vs7-1/2" Cl. 5 Plate
Reference: MPGNCLLer. Ropert Toll	OIHL dated
Reference: Bugnet ltr NP/NET/XI (2444)	er2741DF:GDE dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-1-	-52 dated
PLATE TARGET	ROCKET
Gage 7-1/2" Class B Maker Beth.	HEAD: Cal. 2775 Type Shaped Charge
No. 550232A2 Group B-113A	Maker Picatinny arsanal
Dimensions 131" x 190"	Lot No.
	Filler: Type Comp. P.t.
OBLIQUITY O°	Fuzes T202; Lot PA-E-9121
PENETRATION Complete	Boosters
Thickness at impact 7050	Wt. of head (as fired)
No. of impact on plate 18	
Dist. from nearest impact -12"	MOTOR: Cal. 5" Not. 2 Mod 3
Dist. from near edge Till and 83"	Motor temp. 90° ut 87 1.
Impact area 2" X 2-1/L" Spall: Front 0 Back 0	COMPLETE ROUND: Nark Nod
Dish 0 Spur 1/4"	Wt. (as fired)
Cracks O .	Wt. (burned)
Punching (thrown) (started)	
Back Button (thrown)	OTHER INFORMATION
Bulge O Through opening 3/8" X 3/8"	AIN: RMDA = 847 - HA = 45
III oden obentue 3/8" 1/8"	LAUNCHER 1050' ROcket Launcher
	TO TO ROCKER LAUNCHAY
ROCKET PE	
914mb	Mean
Puse functioning On Tagger	: Striking 1857 Residual
Explosive action (High Order) Low	Order (Cone)
Distance of burst behind plate	
Condition of recovered round	
Head Vas In	(1) LOTIVE) (ILLEMENTIVE) condition.
REMARKS:	
Photo To	CLOSE SWY 1 1
Photo No.	Signed F.W. Kandow
	F.W.Kasdorf
CONFIDENTIAL	
	ORD. FING.
SECURITY INFORMATION	

Impact Record #18

DAHLGREN, VIRGINIA

U. S. NAVAL PROVING GROUND IMPACT NO. 39923

	IMPACT DATE 5-12-52
	NPG TEST NO. T-2222-1.2
OBJECT Functioning	g West of T2023 Fuzes for 2775 Shaped Chare
Hocket Head T2016 with two	500 HVAR Rocket Motors vs 7-1/2" Cl.B Plate.
Reference: MPGNOIZET POLIXI	(2444)Ser2741DF:CDB dated 2 kgy 1952
Task Assignment No. NPG-Re2b -	- 11-1-52 dated
PLATE TARGET	ROCKET
Gage 7-1/2m Class B Maker Reth.	HRAD: Cal. 2775 Type Shaped Charge Mark T2016 Mod No. 3.2 Wt.
Maker Bath. No. 55G232A2 Group B-113. Dimensions 131" X 190"	Maker Picutinny Arsenal
Dimensions 131" X 190"	Lot No.
	Filler: Type Wt.
OBLIQUITY 0°.	Fuses T2023, Lot PA-E-9121
PENETRATIONComplete	Boosters
	50 Wt. of bead (as fired)
	19
Dist. from mearest impact	6n NOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edges and	TREM Motor temp. 90° Wt. 87.85#
Impact area 2171 x	2-1/4"
Spall: Front 0 Back	O COMPLETE ROUND: Mark Mod
Dish O Spur 1	/Ln Vt. (as fired)
Cracks	Wt. (burned)
Punching (thrown) (started)	
Back Button (thrown) starte	OTHER INFORMATION
Bulge	AIN: with 847-Hi-45
Through opening 3/8" 3/8"	
	LAUNCHER 1050' Rocket Launcher
ROC	EKET PERPORMANCE
	ty, f/s: Striking, 1957 Residual
Puse functioning ON TARGET	
Explosive action (High Order)	
Distance of burst behind plate	
Condition of recovered round	
and the state of t	Vas in (EFFECTIVE) (IMETERIVE) condition.
REMARKS:	
Photo No.	Signed F. W. Kander
	G.W.Kaskort
	ORD. ENG.
Confidential	
Bejurity information	Impact Record #19

DESCRIPTION INFORMATION

CONFIDENTIAL

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IMPACT RECORD

DAHLGREN, VIRGINIA

IMPACT NO. 39924

IMPACT DATE 5-12-52

. U. S. NAVAL PROVING GROUND

	NPG TEST NO. T-2222-1,
OBJECT Functioning Ter	et of T2023 Fuzes for 2"75 Shaped Char,
	WAR Rocket Motors vs 7-1/2" Cl B Plate
ference: BucharltrnP/NCI/XI (2444)	01014 dated
ference: Boordx1trNP/NCI/X1(2444)	
sk Assignment No. NPG-Re2b - 11-1	-52 dated
PLATE TARGET	ROCKET
ige 7-1/2" Class B	HEAD: Cal. 2275 Type Shaped Charge
ker Beth 55G232A2 Group B-113A	HEAD: Cal. 2075 Type Shaped Chara Mark 72016 Mod No. 435 Wt.
55G232A2 Group B-113A	Maker Ficationy Arsenal
mensions 131" x 190"	Lot No.
	Filler: Type Comp. B Wt.
TI Gui 11 00	Puzes 12023. Lot FA-E-9121
NETRATION	Boosters
Thickness at impact 7 1/24	Wt. of head (as fired)
Thickness at impact 7.1/2" No. of impact on plate 20 Dist. from nearest impact :	
Dist. from nearest impact	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edges 155 mand 195 m	
Impact area 2" \ 2-1/2"	
Spall: Front O Back O	COMPLETE ROUND: Mark Nod
Dish O Spur 1/4"	Wt. (as fired)
Cracks	Wt. (burned)
Punching (thrown) (started)	
Back Button (thrown) (started)	OTHER INFORMATION
Bulge	ALN: BMDA-377-MA-45
Through opening 3/8" 3/8"	77 _ 11 _ 11
-	LAUNCHER 1050' Rocket Luncher
	ERPORMANCE
NOUREI I	Mean
ight Velocity, f	•
ze functioning ON TARGAT	1727 10014481
	Order) (None)
stance of burst behind plate	
ndition of recovered round	
	n (EFFECTIVE) (IMEFFECTIVE) condition.
MARKS:	
toto No.	Signed F.W. Kandan
	- Kas
JUNIDENTIAL	Ord. 21.G.

Import Record fac

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IMPACT RECORD

	L PROVING GROUND IMPACT NO. 39925
DAMLGR	EN, VIRGINIA IMPACT DATE 5-12-52
	NPG TEST NG-2222-1.21
OBJECT Fungationich Te	est of T2023 Fuzes for 2"75 Shaped Char
	WAR nocket Motors vs 7-1/2" Cl.B Plate.
Reference: NPG NOTE:	c. 1014 dated
Reference: Budrit 1tr NP/NOI/X1 (2444 Nask Assignment No. NPG-Re2b - 11)Ser2741DF:GDB dated 2 May 1352
NOT ASSESSED NO. NICE-REZD - II	-1-72
PLATE TARGET	ROCKET
Tage 7-1/2" Class .	HEAD: Cal. 2075 Type Shaped Charge
laker Beth.	Mark T201c Mod No Wt.
lo. 55623242 Group n-113.	Maker Picatinny Arsenal
Dimensions 131" : 130"	Lot No.
	Filler: TypeComp.B Wt.
OBLIQUITY C	Puzes T2023 Lot PA-E-9121
	Boosters I
Thickness at impact 7.150	Wt. of head (as fired)
No. of impact on plate 21	
Dist. from nearest impact 5"	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edges 58" and 1.102	Motor temp. 90° Vit.87.85#
Impact area 2" X 2-1/4"	
Spall: Pront O Back Q	COMPLETE ROUND: Mark Mod
Dish 0 Spur $1/4$ "	Wt. (as fired)
CracksO	Wt. (burned)
Punching (thrown) (started)	
Back Button (thrown) (atasted)	OTHER INFORMATION
Bulge	ALN: RMDA-377-14-45
Through opening 3/8" 1 3/8"	-0/3-
	LAUJUHER 1050! Rocket Launcher
ROCKET P	ERFORMANCE
	Mean
PlightVelocity, f	/s: Striking 1800 Residual
use functioning In Take	
	Order) (Lone) -
istance of burst behind plate	· · · · · · · · · · · · · · · · · · ·
condition of recovered round	n (EFFECTIVE) (IMEFFECTIVE) condition.
need vas 1	A (BFF BCIIVE) (IMBFF BCIIVE) COMMICTON.
REMARKS:	
Photo No.	Signed F. M. Landon
LIVUU RU.	STEMPU
	r.W.Kasdorf
	ORN. Eng.
we with it is a factor	OMA . And .
Suddening in on William The a	of Here the well
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IMPACT RECORD

DAHLGREN, VIRGINIA

U. S. NAVAL PROVING GROUND IMPACT NO. 39926

	IMPACT DATE 5-13-52
	NPG TEST NOg-2222-1-24
OBJECT Functioning Tes	t of T2023 Fuzes for 2975 Shaped Charge
Rocket Head T2016 with two 500 HV	R Rocket Motors vs 7-1/2" Cl B Plate
Reference: NPG Nottr. Transit 7/0. Reference: Bugge Itrup/NOL/X1 (2444)	1014 dated
Reference: Bugge Itrnp/NOL/X1 (2444)	Ser2741DF:GDB dated 2 May 1952
Task Assignment No. NFG-Re2b - 11-1	-52 dated
PLATE TARGET	ROCKET
Gage 7-1/2m Class B	HRAD: Cal. 2075 Type Shaped Charge
Maker Beth.	Mark T2016 Mod No.744 Vt.
No. 55G232A2 Group B-113A	Maker Picatinny Arsenal
Dimensions 131" X 190"	Lot No.
and the state of t	Filler: Type Comp.B Wt.
OBLIQUITY 0°	Fuzes T2023 Lot PA-E-9121
<u>-</u>	
PENETRATION Complete	Boosters
Thickness at impact 7-1/2m	Wt. of head (as fired)
No. of impact on plate 22	
Dist. from nearest impact 20"	MOTOR: Cal. 5m Mk. 2 Mod 3
Dist. from near edges and 160m	Motor temp. 70° Wt.85.85#
Trace from near edges of and 160%	/O WE-NO-MOS
Impact area 2" 2" 2" Spall: Front 0 Back 0	COMPLETE ROUND: Mark Mod
	Vt. (as fired)
Dish O Spur 1/L" Cracks O	Wt. (burned)
	wt. (burded)
Punching (thrown) (started)	
Back Button (thrown) interted)	OTHER INFORMATION
Bulge	ALN: RMDA-847- HA-45
Through opening 1/4" X 1/4"	• • • • • • • • • • • • • • • • • • • •
	LAURCHER 1050! Rocket Launcher
ROCKET PI	RFORMANCE
	Mean
	s: Stalking 1551 Residual_
Puze functioning On TARGET	
Explosive action (High Order) (Low-	Order) (Hone)
Distance of burst behind plate	
Condition of recovered round	
Head Vac Li	THE CHIVE CONCILLION.
	44
REMARKS: FUZA FUNCTIONING	TIME 56
Photo To	Signed F. M. Kander
Photo No.	or Ruen 4 · W. Warrand
	F.K. Rusdopf
	ORD. ENG.
CONFIDENTIAL	
SECURITY INFORMATION ITEM	act Record #22

IMPACT RECORD

U. 8. MAVAL PROVING GROUND DAHLGREN, VIRGINIA

IMPACT NO. 39927

	IMPACT DATE 5-13-52
•	. RPG TEST NO. T-2222-1.21
. OBJECT Functioning Too	t of T2023 Fuzas for 2175 Shaped Charge
Hooket Head 12016 with two 500	HVAR Rooket Motors vs 7-1/2" Cl.B Plate.
Reference: Books 1trnp, NOL/X1 (2444)	Ser2741DF:GDE dated 2 May 1952
Task Assignment No. NFG-Re2b - 11-1	-52 dated
PLATE TARGET	ROCKET
Gage 7-1/2m Class B	HEAD: Cal. 2075 Type Shaped Charge
Neker heth	Mark T2016 Mod No.340 Wt.
10.55G232A2 Group 3-113 A	Maker Piontinny Arsenal
Dimensions 131 x 190 m	Lot To.
	Piller: TypeComp.B Wt.
OBLIQUITY Oc	Puzes . T2023 Lot PA-E-9121
PENETRATION	Boosters
Thickness at impact	Wt. of head (as fired)
No. of impact on plate	
Dist. from nearest impact	MOTOR: Cal. 5" Mk. 2 Nod 3
Dist. from near edges and	Motor temp. 70° Wt.88.20#
Impact area	
Spall: Pront Back	COMPLETE ROUND: MarkNod
Dieh Spur -	Wt. (as fired)
Cracks	Wt. (burned)
Punching (thrown) (started)	ARTE TENONALETAR
Back Button (thrown) (started)	OTHER INFORMATION
Bulge Through Opening	MM: 2001-817-HA-15
THE OWNER OPERATION	LAUSCHER 1050! Rocket Launcher
ROCKET P	ERPORMANCE
	/s: SEDIENE 1511 Residual
	/s: Stocking 1911 Residual
Puze functioning News	
Matana of hurst hebited plate	- State HEAR DEFLACERATED
Condition of recovered round	
	A (EFFECTIVE) (IMPFECTIVE) condition.
REMARKS:	ad Deflagrated on Impact.
Photo No.	Signed F.W.Karder
	T.W. Kandorf
COMPIDENTIAL	
SECURITY INFORMATION Impac	t Record #23

IMPACT RECORD

U. S. MAVAL PROVING GROUND

DAHLGREN, VIRGINIA

IMPACT NO. 39928

	IMPACT DATE 5-13-52
	NPG TEST NOT-2222-1.24
OBJECT Functioning	Tast of T2023 Fuzes for 2"75 Susped Charg
LOCKER DESIGNATION MINTER MAD 240 H	VAR ROCKET MOTORS VS 7-1/2" Cl. 5 Plate. T
eference: Bucklitrup/NOL/X1 (244)	70.1014 dated
eference: Buck ltrwp/NOL/X1 (244	4)Ser2741DF:GDB dated 2 May 1952
ask Assignment No. NPG-Re2b - 11	-1-52 dated
PLATE TARGET	ROCKET
age 7-1/2" Class B	HEAD: Cal. 27/5 Type Shaped Charge
aker Bath.	Mark 2016 Mod No. 238 Vt.
0. 55G232A2 Group 8-113A	Maker Figutinny Arsenal
imensions 131" x 130"	Lot No.
	Filler: Type Comp. B Wt.
BLIQUITYO°	Puzes T2023 Lot PA-E-9120
ENETRATIONComplete	Boosters
Thickness at impact 7,50	Wt. of head (as fired)
No. of impact on plate 24	
Dist. from nearest impact 12"	MOTOR: Cal. 5" Nk. 2 Mod 3
Dist. from near edges T50 mand L60	
T	Motor temp. 70° Wt.88.00#
9-21	COMPLETE POTTER. March. March
Spall Front O Back O	COMPLETE ROUND: Mark Mod
Dish Spur 1/4"	Wt. (as fired)
Cracks 0	Wt. (burned)
Punching (thrown) (started)	
Back Button (thrown) (stepted)	OTHER INFORMATION_
Bulge	ALN: RMD4-673-HA-45
Through opening 1/L" x 1/L"	
	LAUSCHER 1050! Rocket Launcher
ROCKET	PERFORMANCE Mean
light Velocity.	f/s: Straking 1545 Residual
use functioning Animaker	
xplosive action (High Order) (Lo	w-Order-(Nege)
istance of burst behind plate	**
ondition of recovered round	
	In (EFFECTIVE) (IMEFFECTIVE) condition.
	in (EFFECTIVE) (IMEFFECTIVE) condition.
DIARES: FUE BUNGTION	
TULE FUNCTION	WAS TIME 65 M SEC.
hoto No.	Signed F W. Landon
	The state of the s
	N.Kusdorf
	ORD. ENG.
COMPIDENTAL	UND . ELG .
SECURITY INFORMATION Impact	t Record #24

IMPACT RECORD

U. S. NAVAL PROVING GROUND

IMPACT NO. 39929

DAHLGR	EN, VIRGINIA
	IMPACT DATE 5-13-52
	NPG TEST NQ-2222-1.24
OBJECT Functioning Te	st of T2023 Fuzes for 2075 Shaped Charge
Reference: MPG NOIPET: The Reference: MANUAL ltr NP/NOI/X1 (2444	Ser2741DF:GDB dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-	1-52 dated
PLATE TARGET	ROCKET
Gage 7-1/2m Class R	HRAD: Cel. 2775 Type Shaned Charge
Maker Reth	Mark T2016 Mod No. 35. Vt.
No. 55023212 Group B-113	Maker Picatinny Arsena
Dimensions 131" X 190"	Lot No.
1)1 1 1 70	Filler: Type Comp. BWt.
OBLIQUITY O°	Fuzes
OPLIGUITY O.	T2023 Lot PA-E- 9120
PENETRATION Countete	Boosters
	Wt. of head (as fired)
Thickness at impact 7.50	Ac. of Heed (49 111ed)
No. of impact on plate 25	TH MORAD. Coll on Mod o
Dist. from nearest impact 2-1/	
Dist. from near edges 10 H and 12H	Motor temp. 70° Vit.87.00#
Impact area 2n r 0 1/2n	
Spall: Pront of Back 0	COMPLETE ROUND: Mark Mod
Dish Spur 1/4"	Wt. (as fired)
Crecks	Wt. (burned)
Punching (thrown) (started)	
Back Button (thrown) (ater-	OTHER INFORMATION
Bulge	AIN: RMDA-377-HA-45
Through opening 1/4" X 1/4"	
	LAURCHER 1050 Rocket Launcher
ROCKET I	PERFORMANCE
99.6 - N.A. 97.5 2 - 4.4 hm - 4	As a Maun Boot due 1
	/e: Steeler 1542 Residual
Puse functioning Juliantel	
Explosive action (High Order) (Los	-UPGOF / - (#0807
Distance of burst behind plate	>
Condition of recovered round	
Head Vas	A (MARKETIVE) Condition.
	•
REMARKS: FUZE FUNCTIONING	TIME 69 M SEC
·	
,	
Photo No.	Signed F. W. andor
	J. F. W. Kundorf
CONFIDENTIAL	OKD • ENG .
	·
SECURITY THEORY TON IMPA	et Record #25

IMPACT RECORD

U. S. NAVAL PROVING GROUND DAHLGREN, VIRGINIA

IMPACT No. 39931

	IMPACT DATE 5-14-52
	NPG TEST NO.T-2222-1.21
OBJECT Functionin	g test of T-2023 fuzes for 2.75 Shaped
	Heads T-2016
	ر من المراجع المرا
Reference: NPC 1tr NV /NCL/x1 (2	2444)Ser2741DF:GDE dated 2 May 1952
Task Assignment No. NDG-Re2b -	11-1-52 dated
The control of the state of the	
PLATE TARGET	ROCKET
Gage 7:50 Class B	HEAD: Cal. 2"75 Type Shaped-Chg.
Maker Bethlehem	Mark moo 16 Mod No Wt
No. 55G232A2 Group B-113A	
Dimensions 131" x 190"	Lot No.
OBLIQUITY O°	Filler: Type Comp B Wt. 92#
OBLIQUITY 0°	Fuzes T-2023, Lot PAE-9120
PENETRATION Complete	Boosters 1
Thickness at impact 7.50	
No. of impact on plate 26	
Dist. from nearest impact 6	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edges T53 and	L63" Motor temp. 70° Wt. 87,10#
Impact area 2" x 2-174"	
	O COMPLETE ROUND: Mark Mod
Dish 0 Spur $1/L$	
Cracks 0	Wt. (burned)
Punching (thrown) (started)	
Back Button (thrown) (eterted	OTHER INFORMATION
Bulge	ALN: RMDA-673-HA-45
Through opening 3/8" x 3/8	
	LAUNCHER 1050' Rocket Launcher
ROCE	KET PERFORMANCE
	L.ean
	ty, f/s: Striking 1813 Residual
Puze functioning ON TARGET	
Explosive action (High Order)	(Low-Order) (None)
Distance of burst behind plate	
Condition of recovered round	Jan (m (PODDAMYIPO) (TEDDABAMYIPA)
والمرابع والمستقد والمراب والمرابع	vas in (EFFECTIVE) (INEFFECTIVE) condition.
REMARKS:	FITE JOF TAKET
	WATER COST FOR RECORD
Photo No.	Signed T. W. Kandor
A (2 3 1 1 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2	F. W. KASDORF 1h
CONFI DENTIAL	Ord. Eng.
SECURITY INFURMATION	

Impust Record #26

IMPACT RECORD

	VAL PROVING GROUND	IMPACT NO. 39932
DAIL	GREN, VIRGINIA	IMPACT DATE 5-14-52
		NPG TEST NO.T-2222-1.24
OBJECT Functioning	test of T-2023 fuz	es for 2775 Shaped
Charge Rocket Hea	ds T-2016	
Reference: Books Itr. NP/N/1/XI (24	10.1014 de	ated
Task Assignment No. Nrg-Re2b - 1	1-1-52 de	ated
PLATE TARGET		ROCKET
Gage 7.50 Class B	HTAD: Cal 2	275 True Shaned-Chg.
Maker Bethlehem	MarkT2016 Mg	75 Type Shaped-Chg.
No. 55G232A2 Group B-113A	Maker Pica	tinny Arsenal
Dimensions 131" x 190"	Lot No.	
	Filler: Type	Comp B Wt92#
OBLIQUITYO •	Puzes T-202	3, Lot PAE-9120
PENBTRATION 7-1/4"	Boosters Wt. of head	1 Plant
Thickness at impact 7.50 No. of impact on plate 27	wc. of nead	(45 111ed)
Dist. from nearest impact 6"	MOTOR: Cal.	5" Mk. 2 Mod 3
Dist. from near edgesTLL and L58		
Impact area 2" x 2"	e de la composition della comp	
Spall: Pront O Back O	COMPLETE ROUND	MerkMod
Dish O Spur O	Wt. (as fired	1)
Cracks 0	Wt. (burned)	
Punching (thrown) (started)		
Back Button (thrown) (Exercise)	OTHER INFORMAT	ION
Bulge 1/16"	ALN: RMDA	-673-HA-45
Through opening 0		_ '' _ ''
	LAURCHER 1050 V	Rocket Launcher
P.OCK PT	PERFORMANCE	
ROOREI	Mean	
Flight Velocity,	f/s: Structure 1	832 Residual
Puze functioning ON TARGET		
Explosive action (High Order) (L	ow Order) (Nose)	
Distance of burst behind plate		
Condition of recovered round		
الماكية المحقولات بيراه فاستليب المراد بمستريها بطيطتا والهيات المراد ويراد والمراد والمراد والمراد والمراد والمراد	in (EPPECTIVE) (IN	EFFECTIVE) condition.
FARE PIVETIONIAS TI	THE NOT PARE!	
REMARKS: 7	GETTER & CONTRACT	42
		
Photo No.	Signed F.W.	Kardorl
and the state of t	r. w. K	ASDORIT, In
ONFIDENTIAL	Ord. En	g. ************************************
ECURITY INFORMATION		

Impact Record #27

IMPACT RECORD

U. S. NAVAL PROVING GROUND

DAHLGREN, VIRGINIA

IMPACT NO. 39933

	IMPACT DATE 5-14-52
	NPG TEST NO. T-2222-1.21
OBJECT Functioning	test of T-2023 fuzes for 2"75 Shaped
Charge Rocket Hea	
Reference: MPGNOILTER. M. 1. 1. 1/0	
Reference: BOXONX ltr NP/NOL/XI(2444)Ser2741DF:GDB dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-	1-52 dated
PLATE TARGET	ROCKET
Gage 7.50 Class B	HEAD: Cal. 2"75 Type Shaped-Chg.
Maker Bethlehem	MarkT2016 Mod No. 7. Wt.
No. 55G232A2 Group B-113A	Maker Picatinny Arsenal
Dimensions 131" x 190"	Lot No.
	Piller: Type Comp B Wt. 92#
OBLIQUITY O°	Fuzes T-2023, Lot PAE-9120
PENETRATION Complete	Boosters
Thickness at Impact 7.50	Wt. of head (as fired)
No. of impact on plate 28	
Dist. from nearest impact 5"	MOTOR: Cal. 5" Mk. 2 Mod 3
Dist. from near edges 57 and L59"	Motor temp. 70° Wt. 87.80#
Impact area 2-1/4" x 2-1/2"	-
Spall: Front O Back O	COMPLETE ROUND: Mark Mod
Dish 0 Spur 1/4"	Wt. (as fired)
Cracks 0 Punching (thrown) (started)	Wt. (burned)
Punching (thrown) (started) Back Button (thrown) (started)	OTHER INFORMATION
Bulge 0	ALN: RMDA-673-HA-45
Through opening 3/8" X 3/8"	H H H
	LAUNCHER 1050' Rocket Launcher
ROCKET P	ERFORMANCE
Flight Velocity, f	Mean /s: Striking 1808 Residual
Puze functioning ON TARGET	, b. Daring I coo it cordinates
	Order) (None)
Distance of burst behind plate	
Condition of recovered round	
Head Vas 1	n (EFFECTIVE) (INEFFECTIVE) condition.
DEMARKS	
REMARKS: FUNCTIONING ?	ME VOL MANY
	24-12-1-1
Photo No.	Signed 7. W. Landon
ONFIDENTIAL	Ord. Eng.
ECURITY INFORMATION	VA W. BAILS O

Imract Record #28

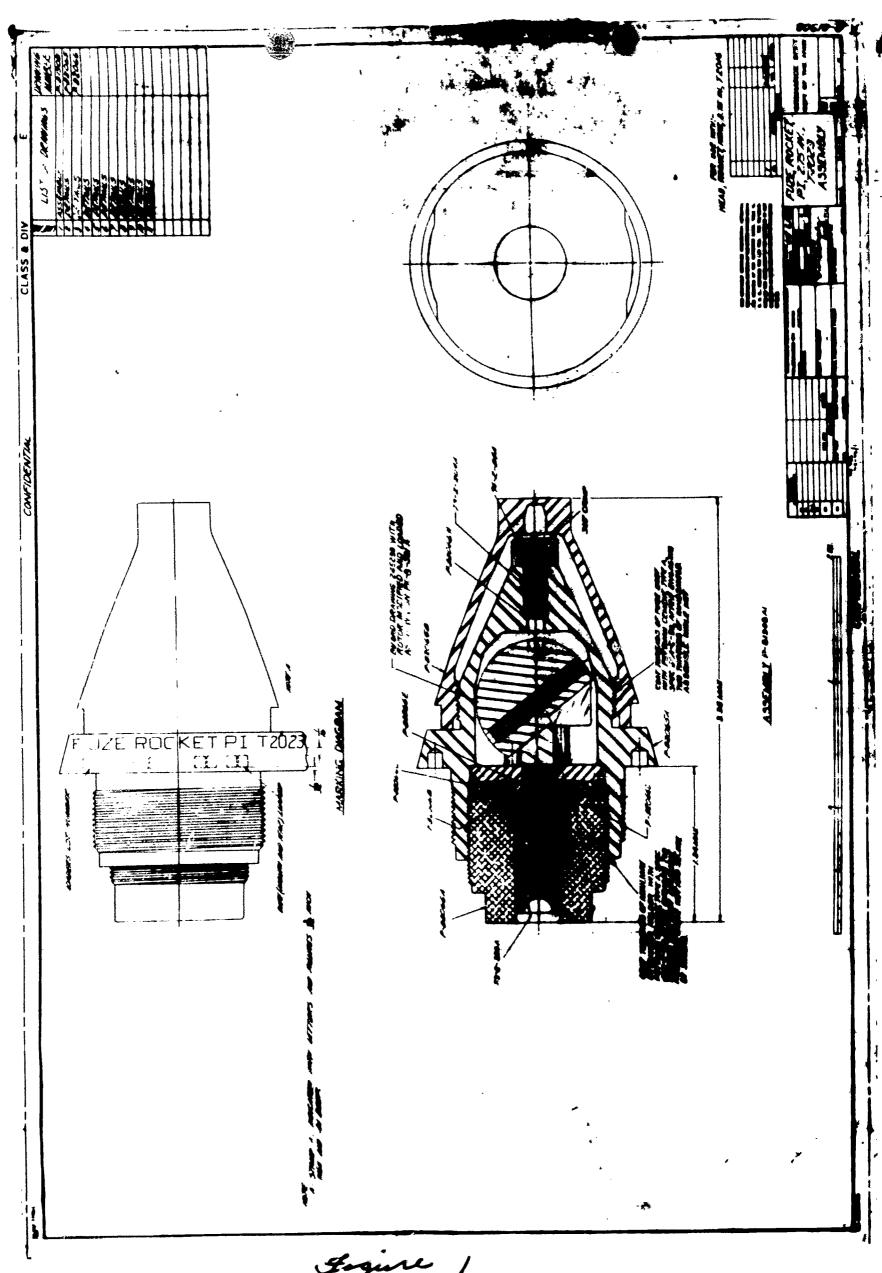
IMPACT RECORD

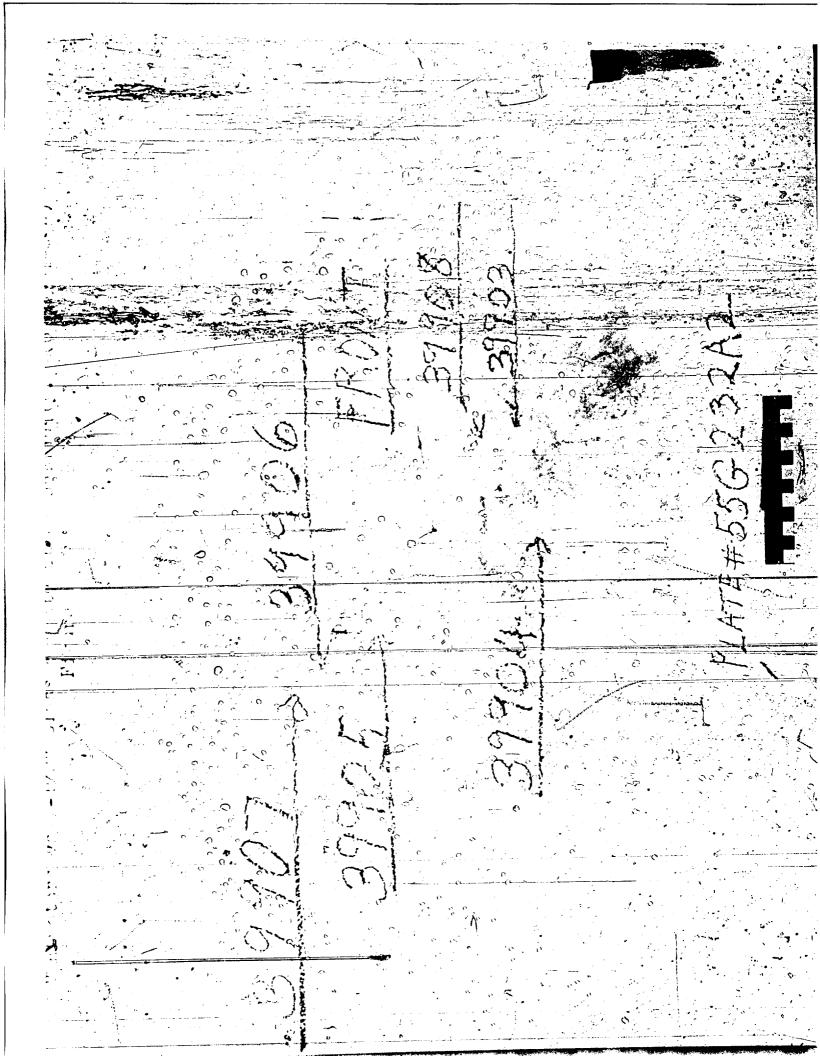
	AL PROVING GROUND	IMPACT NO. 39934
DAMLO	REN, VIRGINIA	IMPACT DATE 5-14-52
	,	NPG TEST NO.T-2222-1.24
OBJECT Functioning Charge Rocket H	test of T-2023 fuz	es for 2"75 Shaped
		. A . A
Reference: RPGNOL itr. Reference: Buox itrNF/NOL/X1(244	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	ited
Task Assignment No. NPG-Re2b - 11	-1-52 de	ted 2 May 1952
PLATE TARGET		ROCKET
Gage 7:50 Class B	HRAD: Cal. 2	175 Type Shaped Chg.
Maker Bethlehem	Mark T2015 Mc	d No.33, Wt.
Maker Bethlehem No.55G232A2 Group B-113A	Maker Plos	tinny Arsenal
Dimensions 31" x 190"	Lot No.	
	Filler: Type	Comp B. Wt92#
OBLIQUITY 0°	Fuzes T-202	23. Lot PAE-9120
PENETRATION Complete	Boosters .	,
Thickness at impact 7.50	Wt. of head	as fired)
No. of impact on plate 29		
Dist. from nearest impact 3"	MOTOR: Cal.	5" Mk. 2 Mod 3
Dist. from near edgesT54 mand 1.66	Motor temp.	70° Wt 87.45#
Towner 4700 00 00 2 3 700	-	
Spall: Front 0 Back 0 Dish 0 Spur 1/4"	COMPLETE ROUND:	MarkMod
Dish O Spur 1/4"		1)
Cracks	Wt. (burned)_	
Punching (thrown) (started)		
Back Button (thrown) (started)	OTHER INFORMAT	ON
		-847-HA-45
Bulge 0 Through opening 3/8" x 3/8"		
	LAUNCHER 1050	Rocket Launcher
ROCKET	PERFORMANCE	
Flight Velocity,	f/s: Stealing 15	(32 Residual
Puze functioning ON TARGET		The state of the s
Explosive action (High Order) (Le	u-treep-tions	
Distance of burst behind plate		
Condition of recovered round		
	in (EFFECTIVE) (IN	FRECTIVE) condition.
REMARKS: MISSES FIRE FINE	CLANING THE - 54	41R IN MELORG
Photo No.	Signed F. N.	ander!
CREATE PORNETS TO SE		
CNFI DENTIAL	Ord. E	ng.

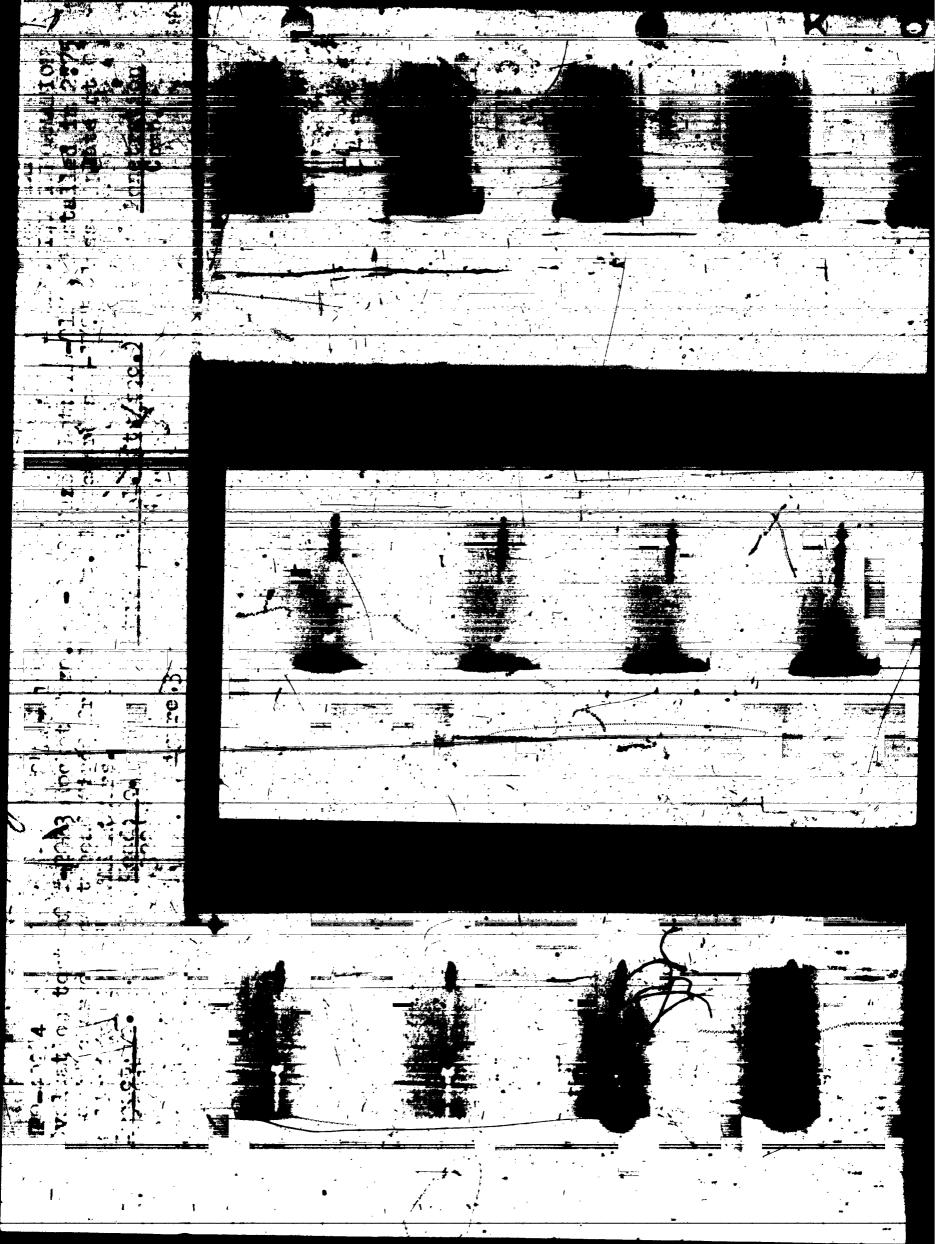
Imract Record #23

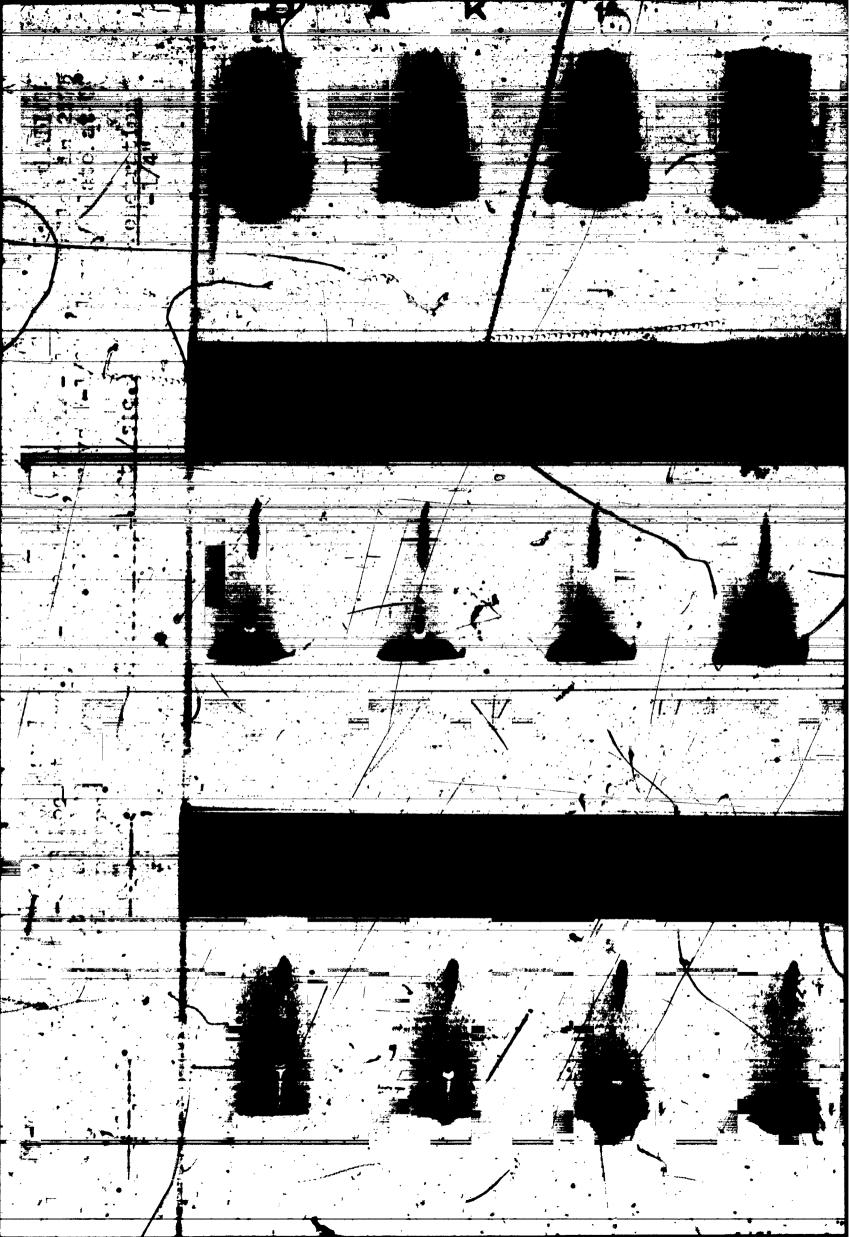
IMPACT RECORD

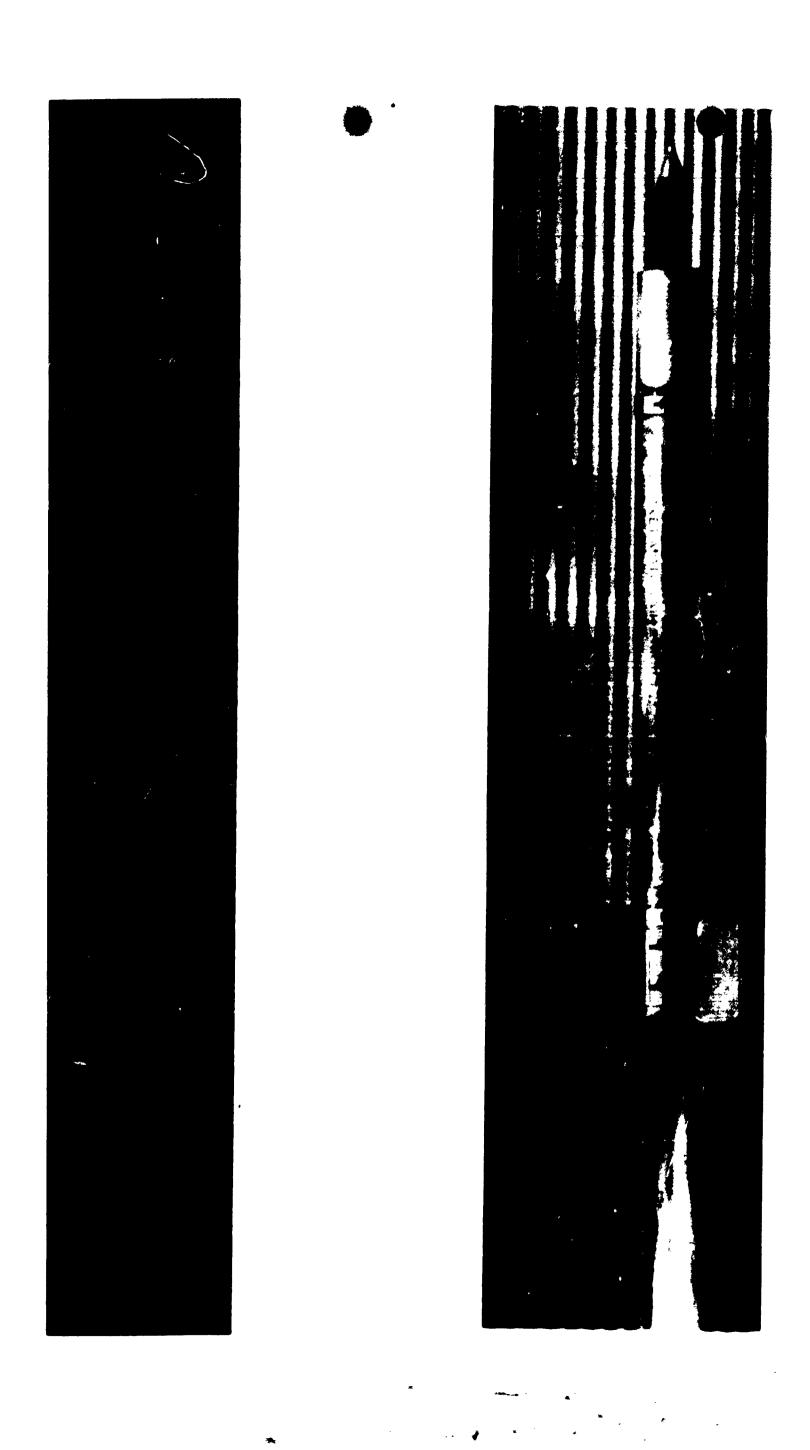
	NAVAL PROVING GROUND	IMPACT NO. 39935
D.	AHLGREN, VIRGINIA	IMPACT DATE 5-14-52
		NPG TEST NO. T-2222-1.24
	ing test of T-2023 fuz	es for 2 175 Shaped
والمراجع والم	t Heads T-2016	
Reference: BROWN ltr. NOL/XI	£: 10.1014 de	ted
Reference: Busha ltrNP/NOL/XII	2444)Ser2741 DF:GDB de	ted 2 May 1352
Task Assignment No. NPG-Re2b -	11-1-52 de	ted
PLATE TARGET		ROCKET
Gage 7750 Class B	HEAD: Cal. 2	75 Type Shaped-Chg.
Maker Bethlehem	Mark T2016 No	od No. 47, Wt.
No. 55G232A2 Group B-113A		atinny Arsenal
Dimensions 131" x 190"	Lot No.	
OBLIQUITY 0.	Piller: Type Fuzes	
D DETERM A ST ON		3. PAE-9120
PENETRATION Complete	Boosters	
Thickness at impact 7.50 No. of impact on plate 30	Wt. of head	as fired)
	MOTOR: Cal. 5	H Mb 2 Mod 2
Dist. from near edges[58"and		70 Mk. 2 Mod 3
Impact area $2^n \times 2 - 1/\mu^n$		
	COMPLETE ROUND:	Mark Mod
Dish 0 Spur 1/4	Wt. (as fired	
Cracks	Wt. (burned)	Mark Med
Punching (thrown) (started)		The state of the s
Back Button (thrown) (started		
Bulge0		DA-673-HA-45
Through opening 3/8" x 3/8"		
•	LAUNCHER 1050	Rocket Launcher
200		,
	KET PERFORMANCE	
Flight Veloci	ty, f/s: Strikeing 15	50 Page due 1
Puze functioning ONT AREAT		Nesidual
Explosive action (High Order)	(Low-Order) (Mone)	
Distance of burst behind plate	, , , , , , , , , , , , , , , , , , , ,	
Condition of recovered round		
Head	as in (EFFECTIVE) (IN	FFECTIVE) condition.
REMARKS: FUZA TUNK FLORA	WILL TIME 57 ho	za :
Photo No.	Signed 4: W.	Landon
	T. W. X	ASDORF, M
CNFIDENTIAL	Ord. En	
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